Law Enforcement Summit

Toward Zero Deaths Panel – Engineering

Christopher Holzer - NDDOT   cholzer@nd.gov

March 8th, 2012
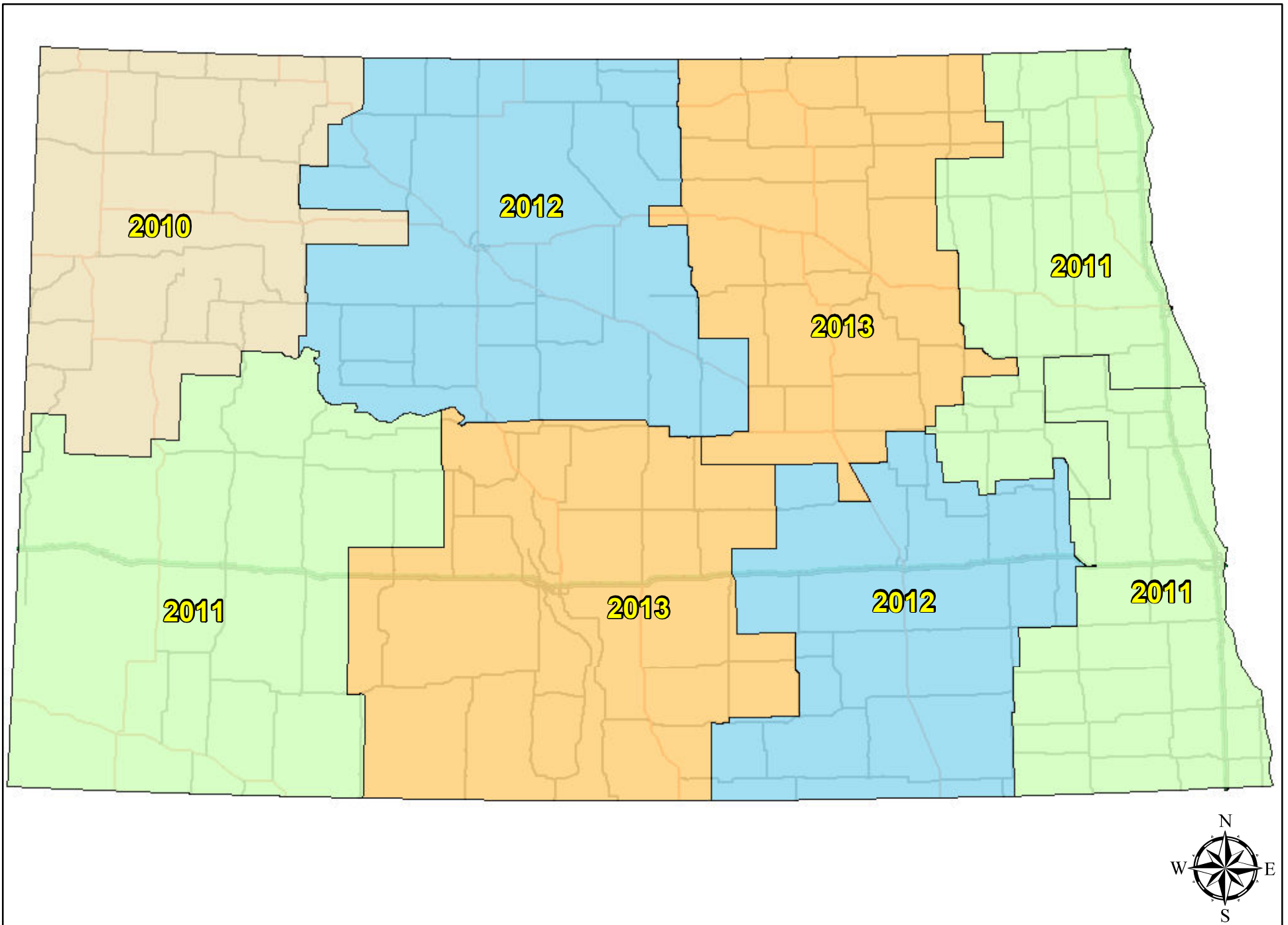
Rumble Strips

Centerline, Edgeline, and Intersection

Centerline Rumble Strips

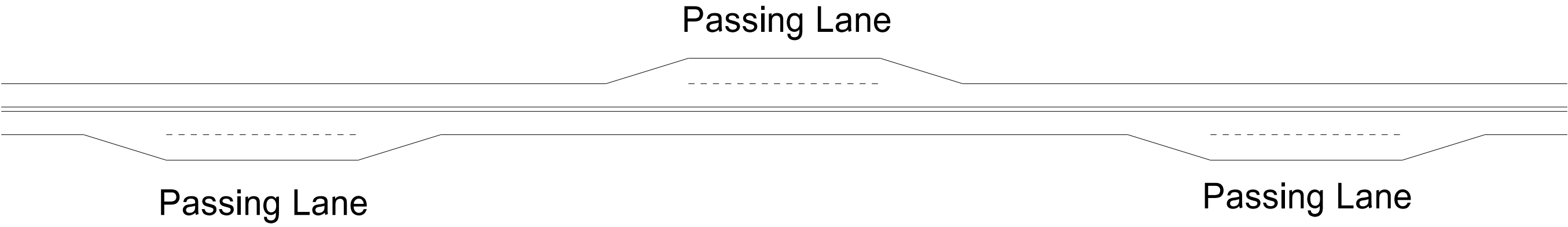Intersection Rumble Strips
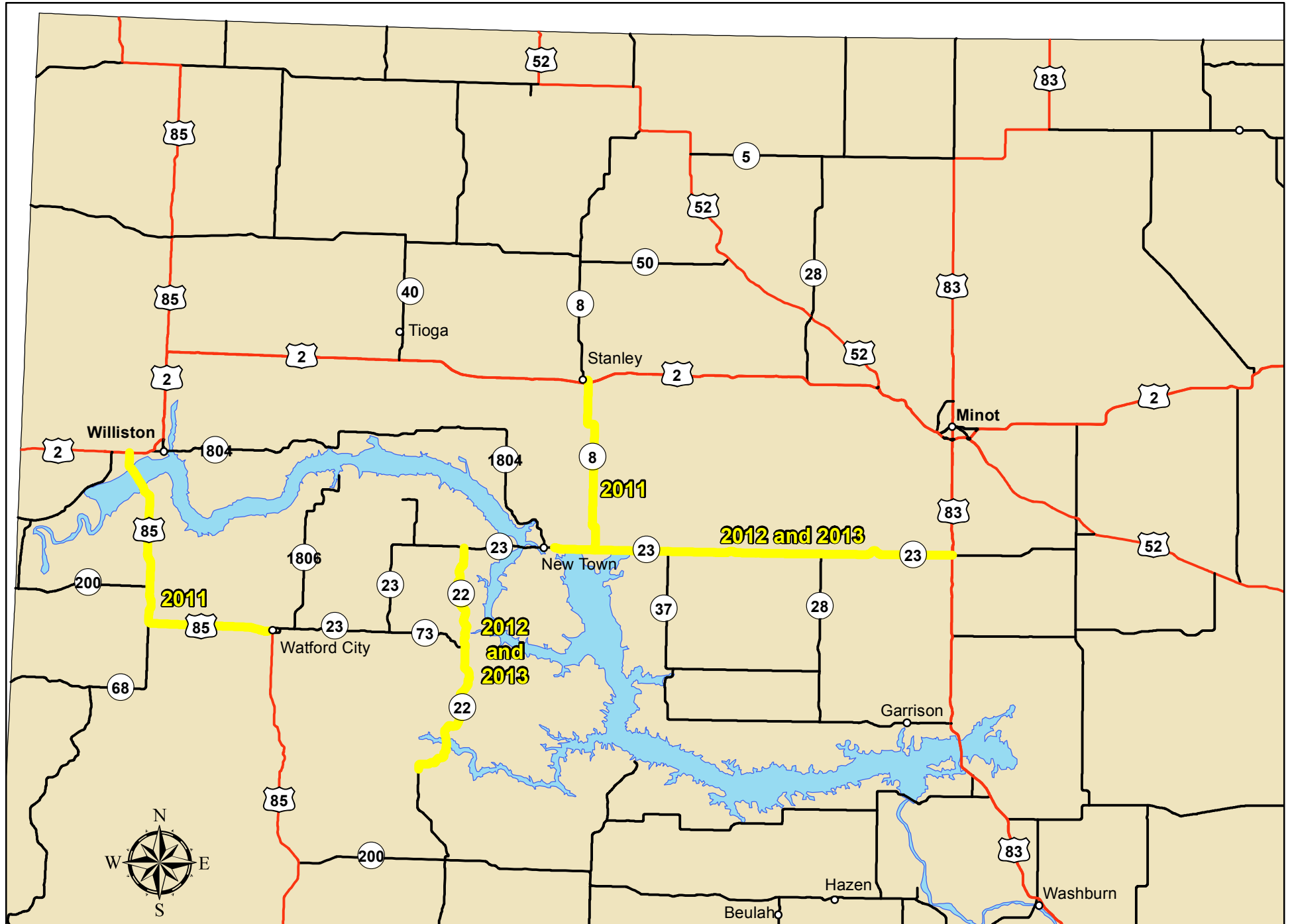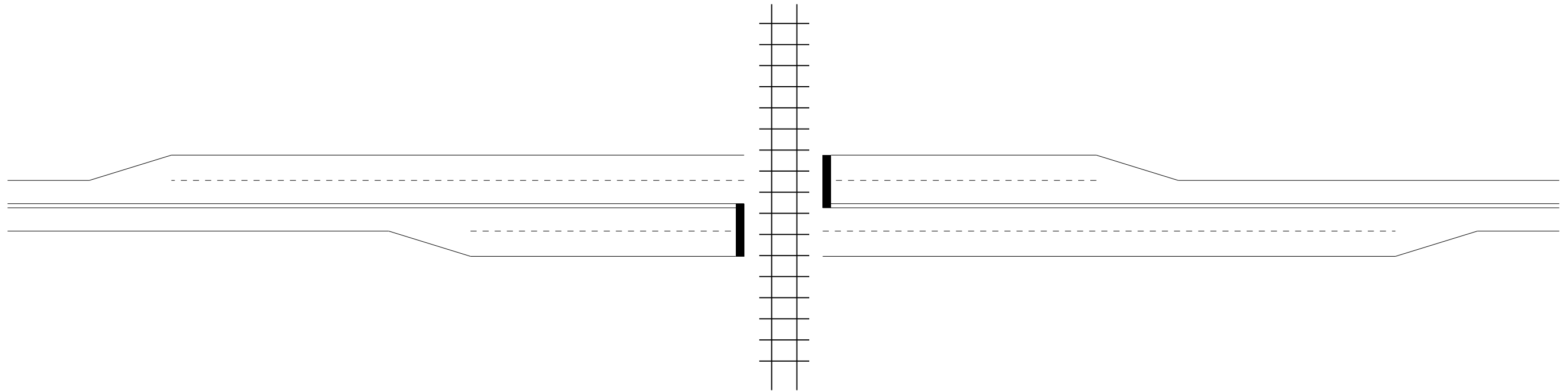
Statewide Rumble Strips

2010

2012

2011

2013

2011

2013

2012

2011

N
W E
S

"Super 2" Concept

Passing Lane

Passing Lane

Passing Lane

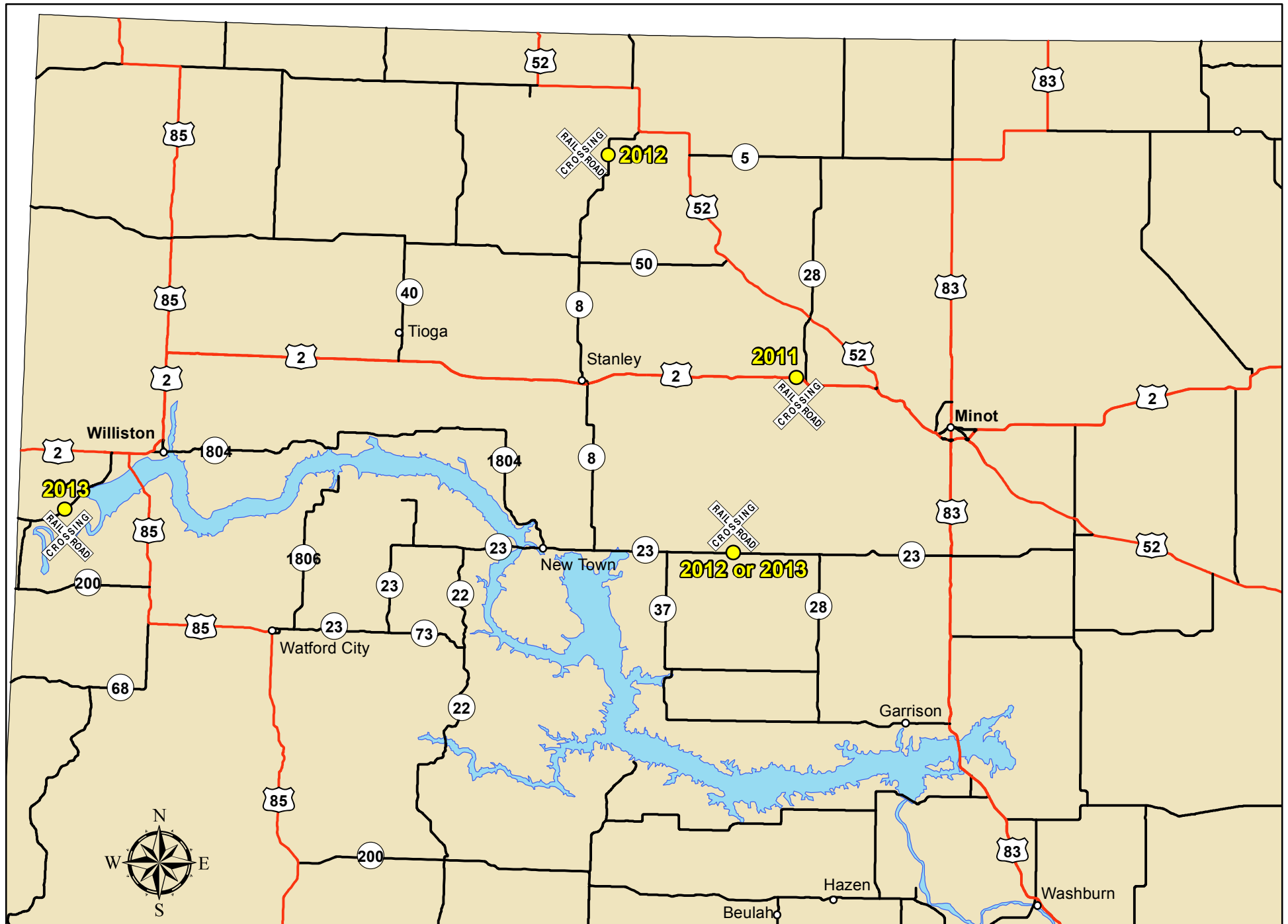# Passing/Climbing Lane Projects

Auxiliary Lanes at Railroad Crossing Concept

Auxiliary Lanes at RR Crossings

Williston

Temporary Truck Reliever Route = 2012

Temp Route Approved by City/County on 2/7/12

Co Rd 6

2012

2

Permanent Truck Reliever Route
is Under Consideration

Co Rd 1

139th Ave NW

2011

11th St

Williston

2012

2012

2

2012

2012

2

2

1804

1804

85

N

W   E

S

Dickinson

22

5-Lane = 2012

Truck Reliever Route
Under Consideration

32nd St SW   2012

33rd St SW   2012
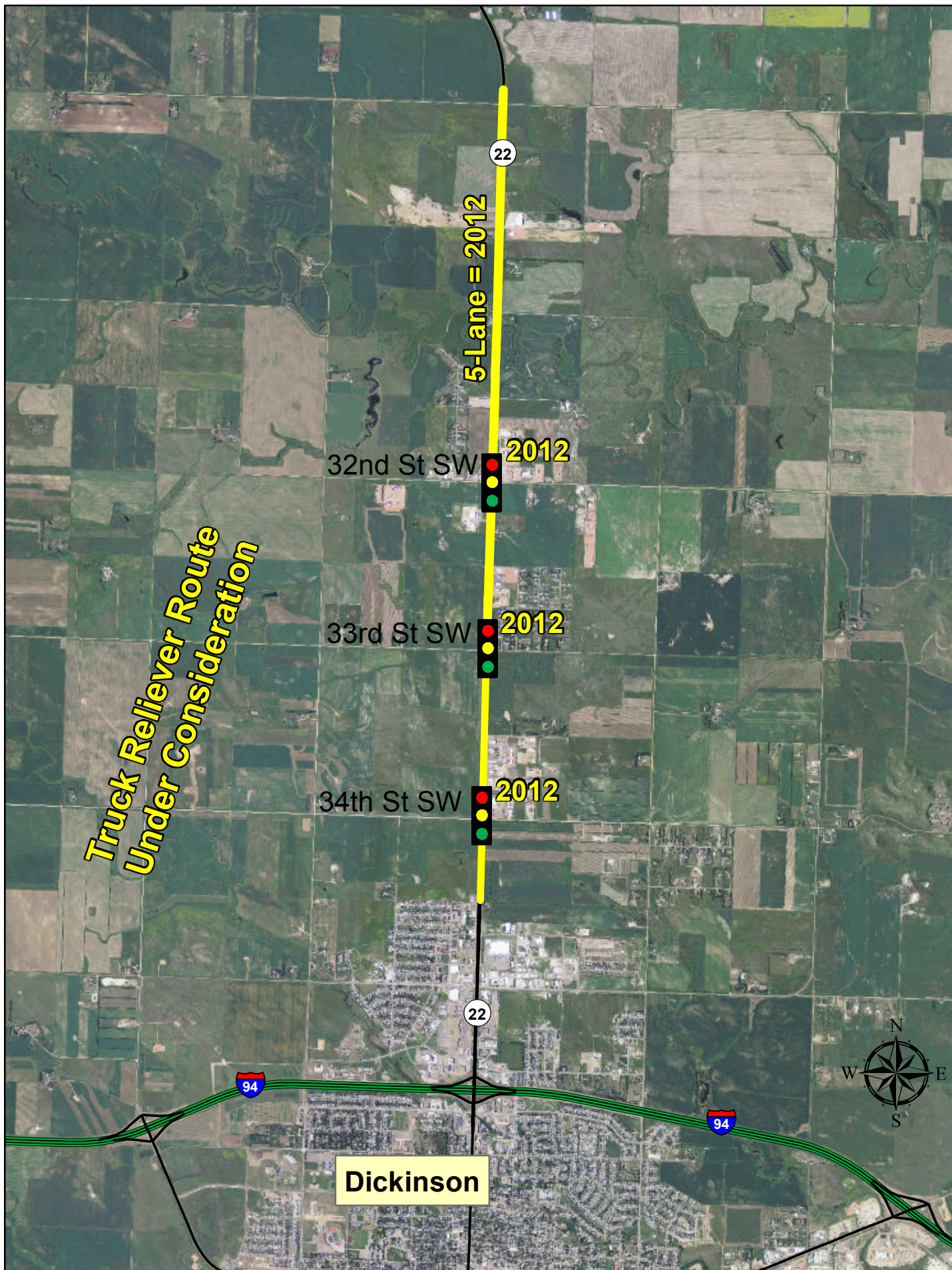
34th St SW   2012

22

94

94

Dickinson

N
W   E
S
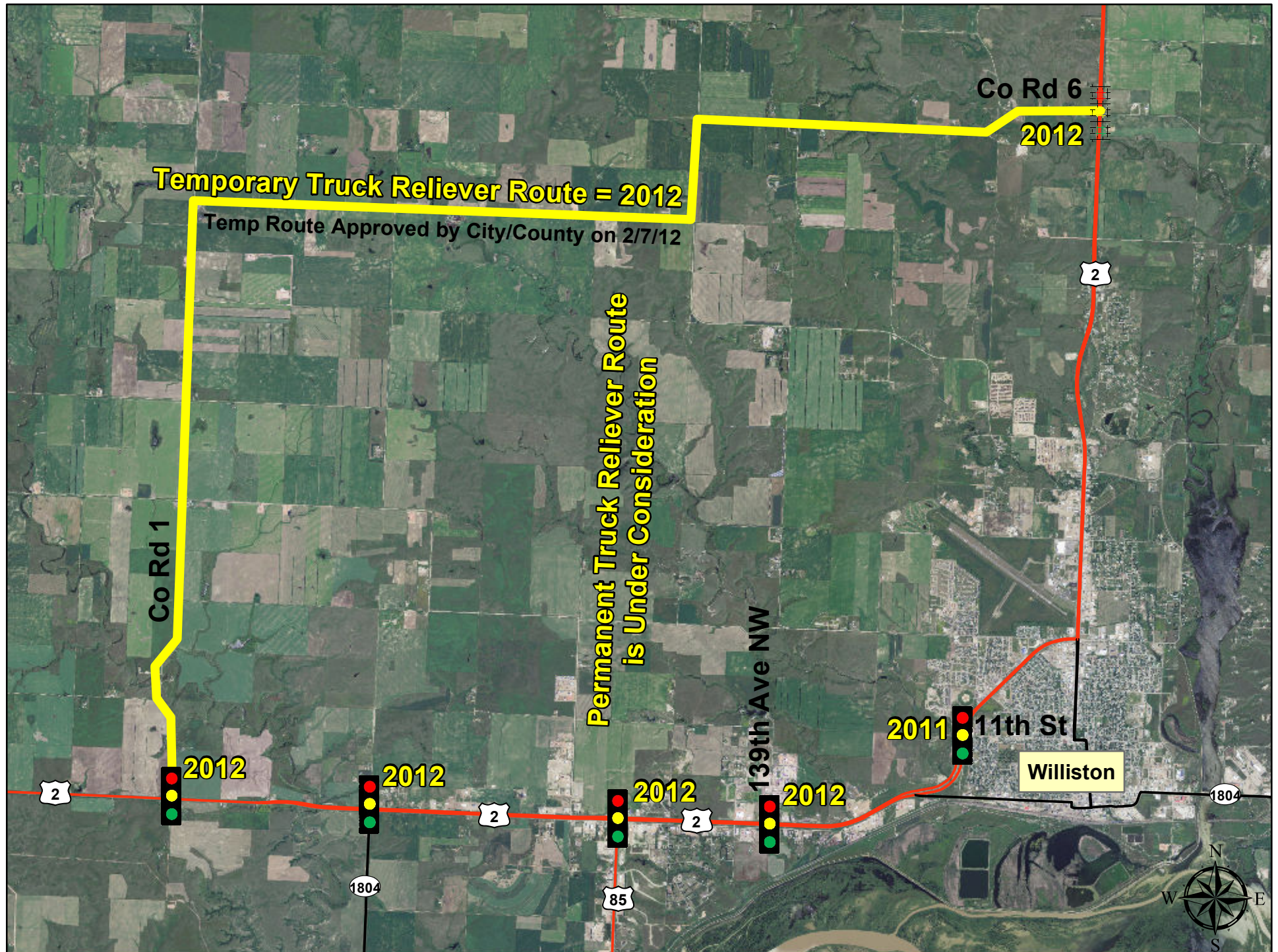
Other Projects

- Truck Reliever Routes are under consideration for:
    - Williston
    - Dickinson
    - Watford City
    - New Town
    - Alexander
- Overheight vehicle detection system for the Long X Bridge (planned for 2012).
- Numerous new traffic signals.
- Numerous turn lane projects.
- Numerous road construction (paving) projects.

Roundabout

Killdeer

22

22

Roundabout 2012

200

200

22

How many existing roundabouts
are in North Dakota?

Existing Roundabouts in ND
(winter of 2011/2012)

- Fargo = 9

- West Fargo = 2

- Cass County = 1

- Williston = 1

- Bismarck = 1

$$\overline{\quad\quad\quad}$$

14

List is unofficial.

North Dakota Department of Transportation

Rules of the Road

2011 - 2013

Parent, if your child is under the age of 18, please read pages 1 through 11.

ROUNDABOUTS

A roundabout is a circular intersection where vehicles travel around a center island in a counter-clockwise direction. These intersections are designed to reduce the number and severity of collisions, as well as provide operational efficiencies. When approaching a roundabout, perform the following steps:

1. Reduce your speed.

2. If more than one lane exists, use the left lane to turn left, the right lane to turn right, and all lanes to go through unless directed otherwise by signs and pavement markings.

3. Yield to pedestrians and bicyclists.

4. Yield to circulating traffic when entering the roundabout.

5. Stay in your lane within the roundabout and use your right-turn signal when exiting.

6. Always assume trucks need all available space—do not pass them!

7. Clear the roundabout to allow emergency vehicles to pass and do not enter the roundabout if one is approaching.

Large Vehicles

Roundabouts are designed to accommodate all vehicle types, including truck and trailer combinations. To assist large trucks, the center island includes an apron to accommodate the rear wheels of the vehicle.

INTERSTATE DRIVING

Speeds are higher on the Interstate than on city streets. Because of this, your vehicle will travel further during your reaction time. To drive safely on the Interstate, you should:

• Be alert. Use your mirrors so that you know what is behind you as well as what is in front of you.

• When changing lanes, use your turn signals and make sure the lane is clear. When passing, do not cut back into the right lane too quickly.

• Keep to the right if you are traveling slowly.
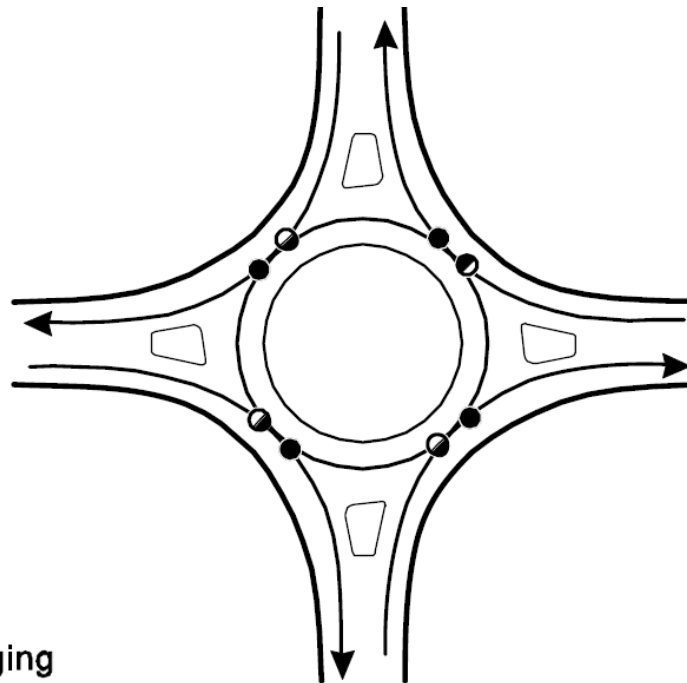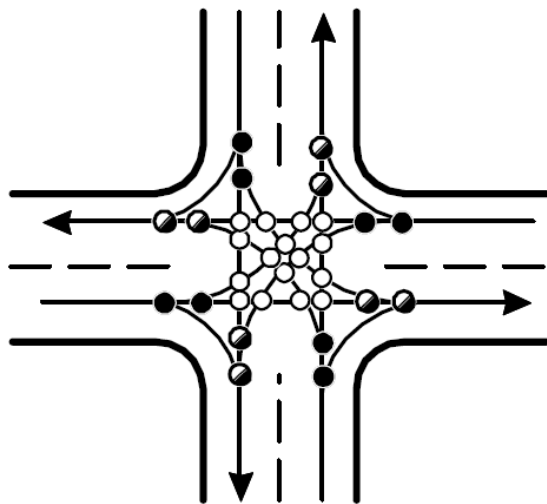
ND 22

ND 200

ND 200

ND 22

N
W E
S

32 Conflict Points

8 Conflict Points

● Diverging
◑ Merging
○ Crossing

From
NCHRP Report 672
Exhibit 5-2

Mean Reduction (%)	
All Crashes	Injury Crashes
35%	76%

From
NCHRP Report 672
Exhibit 5-10

Why at ND 22 & ND 200?

- To reduce conflict points.
  - Eliminate right angle and left turn crashes.

- Can efficiently handle wide ranges of traffic volumes.
  - Existing entering traffic ~8500 vehicles per day.
  - Can handle up to 17,000 no problem.
  - May be able to handle up to 25,000.

- No signal maintenance.

NDDOT's Roundabout Website

Coming soon…

Roundabout Video Links

Oversized Truck Through Roundabout (30 sec)

http://www.youtube.com/watch?v=y7S47vHdvvY

Gaylord Roundabout with Semi Truck (20 sec)

http://www.youtube.com/watch?v=CTy8J40vS5A

Roundabout Myth – Large Trucks (4 min.)   house and wind turbine pole

http://www.youtube.com/watch?v=0nVzsC2fOQw

Big Trucks, Emergency Vehicles No Problem For Roundabouts (4 min.)

http://www.youtube.com/watch?v=d5dxB-nFEZA

Washington State DOT (5 short videos, different roundabout topics)

http://www.wsdot.wa.gov/Safety/roundabouts/

Federal Highway Administration Roundabout Website (more than 10 min.)

http://safety.fhwa.dot.gov/intersection/roundabouts/

Now that you know about roundabouts…

…teach your relatives, friends, and co-workers.